

A COMPARATIVE STUDY OF HARITAKI PRAYOGA AND TRIVRUTADI CHURNA IN THE MANAGEMENT OF AMAVATA (RHEUMATOID ARTHRITIS)

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Abstract

The treatment for Amavata (Rheumatoid Arthritis) is a particular challenge to the physician. The line of treatment of Amavata expounded by ancient Acharyas contains sub-sequential use of langhana (fasten), swedana (perspire), katu (pungent), tikta (bitter), deepana (stomachic) drug, snehapana (internal oleation), basti (enema) and is based on the stage of the disease, so it may be more successful. Total 35 patients of Amavata were selected as open random clinical study and the patients are given with Haritaki prayoga and Trivrutadi churna (Tivrutadi powder) for one month. Significant result was observed in this comparative study of Haritaki prayoga and Trivrutadi churna in the management of Amavata (Rheumatoid Arthritis). In the present study, 35 patients were registered. The diagnosis was done on the basis of signs and symptoms described in both Ayurvedic and modern texts. The selected patients were randomly categorised in two groups. In Group A, patients were administered Haritaki prayoga 5 g twice a day for 30 days. In Group B, patients were administered Trivrutadi churna (Tivrutadi powder) 5 g twice a day for 30 days.

Keyword: Amavata; Rheumatoid Arthritis; Trivruta; Haritaki.

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INTRODUCTION

Amavata is a disease of chronic joint and body pain, accompanied by a swelling of some or all of the synovial joints. These symptoms are typically accompanied by immobility, loss of taste, thirst, indigestion, lack of enthusiasm, feeling of heaviness and fever.

The basic clinical features of Amavata have been recognized in Ayurvedic medicine for thousands of years. The two oldest texts on Ayurvedic medicine, the Charaka Samhita and Sushruta Samhita both of these texts, however also described features of Amavata in a syndrome called Vatavyadhi (a diverse group of symptoms that are organized according to the systemic and local manifestation of vata dosha). According to the Charaka's description of Vatavyadhi, when vata affects the bones (asthi) there is painful swelling of the joints and immobility. Sushruta Samhita adds that along with the inflammation, immobility and pain, the joints in Vatavyadhi disorders eventually become deformed. Much later another condition called Vatashonita is described in the Ashtanga Hridaya that has clinical features in common with Amavata but a different etiology. As a distinct clinical entity in and of itself Amavata was only described in the Madhava nidana.

Amavata (Rheumatoid Arthritis) is the term is formed by the union of two words Ama (A product of digestion) and vata both play a crucial role in the samprati (pathogenesis of disease) of Amavata. Amavata, a disease of vitiated vata in association with ama is produced as a resultant of vicious cyclic mechanism of mandagni (poor digestive fire) and formation of ama, due to erroneous diet and regimen. The vitiated vata spreads ama throughout the body, so Amavata involves the whole body, especially sandhi (joints). According to modern medicine, it can be correlated with Rheumatoid arthritis which is an autoimmune disease. In which the immune system of the body attacks its own tissues. In

its typical form Rheumatoid arthritis is a symmetrical destruction and deforming poly-arthritis affecting small and large synovial joints with a variety of extra-auricular features and the presence of circulating antibodies. Present study, Trivrutadi churna (Tivrutadi powder) and Haritaki prayoga has been chosen as a shamana (alleviating the symptoms) drug in Amavata, which is selected from Bhaishajya Ratnavali.^[1]

AIMS AND OBJECTIVES

- To study the effect of Haritaki prayoga in Amavata (Rheumatoid arthritis).
- To study the effect of Trivrutadi churna (Tivrutadi powder) in Amavata.
- To study the aetiology and Pathogenesis of Amavata (Rheumatoid Arthritis) in both Ayurvedic and Modern perspectives.

MATERIAL AND METHODS

Total 35 patient having signs and symptoms of Amavata (Rheumatoid arthritis)^[2] as below were selected from Kaya chikitsa department of Hon. Annasaheb Dange Ayurved Medical College, Ashta, Sangli, Maharashtra, India.

- Sandhishotha (Swelling of joints)
- Sandhishula (Pain of joints)
- Stabdhata (Stiffness)
- Aruchi (Anorexia)
- Trishna (Thirst)
- Jwara (Fever)

Group A

Patients in Group A were administered with Haritaki prayoga. 5 g of Haritaki churna (Fruit rind powder of *Terminalia chebula*) was mixed with 2 tola of Erand taila (Castor oil).

Group B

Patients in Group A were administered with Trivrutadi churna.

Preparation of Trivrutadi churna (Tivrutadi Powder)

Powders of each Trivrut (*Operculina turpethum*), Rock Salt, Shunti (Ginger) were taken equally quantity and mixed thoroughly and kept in air tight container.^[3]

Dose and Duration of the study

Patients in both the Group A and Group B were administered with 5 g of Haritaki prayoga and Trivrutadi churna (Tivrutadi Powder) respectively twice daily at 6 AM and 6 PM with Kanji (fermented rice gruel) for 30 days.

Study design and Sample size

Sample size – 35

It is an open random clinical study. The study was carried out after getting the Institutional Ethical Committee Clearance. (Ref. No.: 221-3)

Total 35 patients were selected randomly and divided into two groups by lottery method.

Inclusive criteria

- Patients of age between 15 to 65 years.
- Both male and female.
- Patient suffering from signs and symptoms of Amavata (Rheumatoid arthritis).

Exclusive criteria

- Pregnant and Lactating mother.
- Hypertension, Tuberculosis, Diabetes Mellitus.
- Gouty Arthritis, Chronicity more than 5 years.^[4]

Investigation

- RA Factor

- X-Ray

Assessment Criteria

a. Clinical Assessment-

- Pain in joint
- Swelling of the joint
- Stiffness of the joint
- Tenderness of joint
- Trushna (Thirst)
- Aruchi (Anorexia)
- Sandhishotha (Swelling of the joint)
- Sandhishula (Pain of Joints)
- Stabdhata (Stiffness)^[4]

The scoring pattern for the assessment is elaborated in Table 1. Grading as per modern point of view is mentioned in Table 2.

b. Functional Assessment-

- Grip Strength
- Walking Time
- General Functional Capacity^[5]

c. Investigation Assessment-

- RA Factor
- ESR^[5]

Rheumatoid factor

The serum of the patients was tested for rheumatoid factor as an aid to diagnosis and to assess the severity of the disease activity. The method adopted for this purpose was that of latex agglutination test.

DISSUSSION

General description of the patients studied in the present series was as follows. (Table 3)

Age

All the 35 patients registered for the present study were ranging from 15 to 65 years.

Table 1: Scoring pattern

Sl.No.	Observation	Grade 1	Grade 2	Grade 3	Grade 4
1	Pain in joint	No pain	Mild pain of bearable nature, comes occasionally	Moderate pain, but no difficulty in joint movement	More difficulty in moving the joints and pain is severe
2	Swelling of the joint	No swelling	Mild Swelling	Moderate Swelling	Severe Swelling
3	Stiffness of the joint	Stiffness lasting for 5 min	Stiffness lasting for 5 min to 2 hr	Stiffness lasting for 2 hr to 8 hr	Stiffness lasting for more than 8 hr
4	Tenderness of joint	No tenderness	Subjective experience of tenderness	Wincing of face on pressure	Wincing of face with withdrawal of affected part on pressure
5	Grip strength	200mm of Hg or more	195 to 120 mm of Hg	115 to 70 mm of Hg	Under 70 mm of Hg
6	Walking time	To walk a distance of 50 ft	To walk a distance of 30 ft	To walk a distance of 15ft	To walk a distance of 5 ft
7	General functional capacity	Complete ability	Adequate normal activity	Few activities are persisting	Patient is totally bed ridden
8	ESR	0-20	20-35	35-50	Above 50

Table 2: Grading as per modern point of view

No	Parameter	Grade			
		1	2	3	4
1	Grip Strength By Sphygmomanometer	200mmHg	100-120mmHg	110-70mmHg	Under 70mmHg
2	Walking time for 50 feet in sec	16-20	21-30	31-40	>40
3	General Functional Capacity	Complete ability to carry on all routine duties	Adequate normal activity despite slight difficulty	Few activities are persisting but patient can take	Patients is totally bed ridden
4	ESR	0-20	20-35	35-50	Above 50

In which maximum patients (42.85%) were between 31 to 45 years age group, which was followed by 34.22% patients in the age group of 46 to 65 years. Observations of this study were in accordance with the findings of Rheumatoid Arthritis in middle age.

Sex

In this study majority of the patients were female (68.57%) as compared to male patients (31.44%).

Religion

Majority of the patients in this series were Hindus (77.14%), which may be due to predominance of Hindu community in this particular region

Occupation

Most of the women registered were housewives i.e. 57.14%, which reflects the general occupation of majority of the females in this area

Table 3: General description of the patients

Sl.No.	Observation	Range	No. of Patients		Percentage	
1	Age	15-30	15		42.85	34.22
		31-45	12	08	22.85	
		46-65				
2	Habit	Vegetarian	23	12	65.71	34.28
		Mixed				
3	Sex	Male	11	24	31.44	
		Female			68.57	
4	Religion	Hindu	27		77.14	22.85
		Muslim	08			
5	Marital status	Married	31		88.57	
		Unmarried	04		11.42	
6	Education	Illiterate				
		Primary	06	17	17.14	
		Secondary	10	02	28.57	
7	Occupation	Graduate				
		Student				
		Housewife	03	20	08.57	
		Service	07	03	20.00	
		Labour	02		05.71	
8	Addiction	Miscellaneous				
		Tea / Coffee				
		Tobacco	29	07	82.85	
		Smoking	06	04	17.14	
9	Prakriti (Bio enrgey)	Alcohol	09		25.71	
		Steroid				
		Vata-Pitta	03	07	08.57	
		Kapha-Pitta	25		71.42	
10	Agni (Digestive fire)	Kapha-Vata				
		Tikshna (Sharp)	00	00	00.00	
		Sama (Balanced metabolism)	08		22.85	
11	Kostha (Alimentary tract)	Vishama (Erratic)	27		77.14	
		Manda (Slow)				
		Mrudu (Soft)	03	23	08.57	
12	Family history	Madhyama (Moderate)	09		25.71	65.71
		Krura (Hard)				
		Positive	10	25	28.57	71.42
		Negative				

Marital Status

In the present study majority of the patients (88.57%) were married as they were from the middle age group

Family History

71.42% of the patients of this study reported negative family history of joint disorders whereas 28.57% patients reported positive family history

Education

In the present study maximum no. of patients (77.85%) were educated from primary to graduate level, while remaining were uneducated (17.14%).

Deha Prakriti

In this study, it was found that maximum number of patients i.e. 71.42% were possessing Kapha Vata Prakriti.

Table 4: Effect of therapy on signs and symptoms

Effect of therapy on		B.T	A.T	Percentage	S.D	S.E	t	P
Pain	Group A	3.000	2.41	19.46	00.66	0.190	03.07	< 0.02
	Group B	3.275	2.42	26.33	00.61	0.176	04.05	<0.01
Swelling	Group A	01.27	00.56	72.00	00.16	00.54	05.68	<0.001
	Group B	01.20	00.43	64.00	00.70	00.19	04.15	<0.01
Stiffness	Group A	02.08	01.42	32.00	00.49	00.14	04.78	<0.01
	Group B	02.28	01.28	44.00	00.18	00.68	05.56	<0.001
Tenderness	Group A	02.25	01.67	26.00	00.52	00.15	03.87	<0.01
	Group B	02.14	01.21	43.00	00.61	00.16	05.81	<0.001
grip strength	Group A	37.00	38.00	02.70	01.34	00.38	02.63	<0.05
	Group B	31.42	33.57	06.84	02.14	00.57	03.74	<0.01
walking time	Group A	30.00	27.25	09.16	01.40	00.40	02.90	<0.02
	Group B	34.64	29.57	14.63	02.23	00.60	08.49	<0.002
general functional capacity	Group A	01.83	01.66	29.28	00.49	00.14	04.66	<0.001
	Group B	01.92	01.45	29.68	00.51	00.14	04.19	<0.01
ESR value	Group A	32.91	28.66	12.91	13.06	03.44	01.05	>0.05
	Group B	38.57	28.57	25.93	13.03	03.48	02.87	<0.05

In general Kapha Prakriti will have Mandagni leading to Ama formation, which when provoked by Vata and gets settled in respective Sleshma sthana. So, it is justifiable that Kapha vata prakriti persons are easily prone to Amavata.

Koshtha

In the present study majority of the patients i.e. 65.71% had Madhyama Koshtha, which was Krura Koshtha followed by in 25.71% of the patients.

Mode of action

Selectivity and affinity are the principle parameter which characterized the interaction between drug and receptor. Multiple receptors are present in the body for single drug. Samprapti vighatana is said to be the treatment. Therefore, the action of drug means dismantle the Samprapti ghatakas of the disease. Hence to explain the mode of action of a drug means to establish a relationship between the Samprapti ghataka of the disease and pentafold principles of Rasa (taste), Guna (properties), Virya (potency), Vipaka (post digestion) and Prabhava (special action) of the drugs.

Haritaki is well known drug used for purgation, when administered orally. After oral administration, it is converted into Ricin oleic acid by pancreatic juice (lipase), which irritates the bowel, stimulates the intestinal glands and muscular coat to cause purgation. It acts in 4 –5 hours causing lipid stools without gripping pain. It is Vata-kapha Shamaka due to Snigdha (unctuous), Tikshna and Sukshma Guna. Castor oil is having both Snigdha, Ushna Guna. Thus it is having Pachana (digestive) and Snehana Karma. It is seen that most of the substances, which perform the Pachana karma are not Snigdha, but Eranda Taila is utilized both for Virechana and ama pachana properties.

Saindhava has got deepana (appetizer) and Vrishya (rejuvenative) properties in small doses, it is highly carminative and *Zingiber officinale* exhibited marked anti-inflammatory activity in rat as compared to pridinisolone.

Virechana (purgative) drug due to its Ushna, Tikshna, Sukshma Guna reaches to heart by the virtue of their potency and thereby circulates all over the body. They liquefy the morbid dosha and bring them up to the Amashaya (stomach) from here the morbid factors through anal canal route are expelled out leading to Virechana. It has direct affect on Agnisthana (place of digestion) and thus also helpful in increasing

Agni (digestive fire). In disease Amavata, srotorodha (obstruction) is present which is clear due to the property of Srotovishyandana (clears obstruction) of Virechana drugs. Virechana also help in normalizing the Pratiloma Gati (opposite direction) of Vata thus relating the general symptoms like Anaha (distention of abdomen with stools and often gas), Antrakujana (Intestinal gurgling sounds), Kukshishula (pain in abdomen) etc. Thus, Virechana help in breaking the Samprapti of disease.

The drugs was mainly katu (pungent), tikta (bitter), madhur (sweet) rasa (taste).^[3] Specially katu (pungent), tikta (bitter), rasa (taste) possesses antagonistic properties to that of ama (a product of digestion) and Kapha which are the chief causative factors in this disease.

According to this study, after administration of Trivrutadi churna and Haritaki prayoga for one month there is significant result seen in Amavata (Rheumatoid arthritis). On comparing the effect of therapy, it can be concluded that Trivrutadi churna (Trivrutadi powder) provided better relief than Haritaki prayoga. (Table 4)

CONCLUSION

From this study, it is concluded that non-compliance of code of healthy diet, selection and eating plays a major role in causation of disease. Hence, Researcher can say that code and conduct of healthy eating must be followed to achieve early and better results of the disease. On comparing the effect of two therapies it can be concluded that Trivrutadi churna provided better relief than Haritaki prayoga in most of the sign and symptom of the disease at significant level.

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